



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|-------------------|
| 10/656,190 | 09/08/2003 | Nobuhiro Miki | 21776-00042-US | 8417 |
| 30678 | 7590 | 12/06/2006 | EXAMINER | |
| CONNOLLY BOVE LODGE & HUTZ LLP P.O. BOX 2207 WILMINGTON, DE 19899-2207 | | | | KORNAKOV, MICHAIL |
| ART UNIT | | PAPER NUMBER | | |
| | | 1746 | | |

DATE MAILED: 12/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/656,190 | MIKI ET AL. |
| | Examiner | Art Unit |
| | Michael Kornakov | 1746 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 29 September 2006.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-5,8-13,18 and 19 is/are pending in the application.
 4a) Of the above claim(s) 1-5,8-10 and 19 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 11-13 and 18 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) 1-5,8-13,18 and 19 are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. 09/417,009
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>12/10/03</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 11-13 and 18 in the reply filed on September 29, 2006 is acknowledged. Claims 1-5, 8-10, 19 are withdrawn from consideration as being directed to non-elected inventions. Claims 11-13, 18 are currently examined on the merits.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of **50 to 150 words**. It is important that the abstract **not exceed 150 words** in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Appropriate correction of the instant abstract is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 11-13, 18 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The recited in claim 11 "wherein substrates to be purified are set one by one" constitutes an indefinite subject matter because it is not clear whether the way of holding multiple substrates in the processing chamber is indicated or introduction, treatment and removing a single substrate is recited.

Clarification is required. Claims 12,13,18 are rejected because of their dependency and failure to remove the ambiguity of parent claim.

5. Claim 18 recites the limitation "superheated steam processing". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 11-13, 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Kunze-Concewitz (U.S. 5,964, 952).

Kunze-Concewitz discloses a surface purification method of a semiconductor wafers, LCDs (abstract, Fig.3, position 21; col.2, lines 14-20; claim 11), the method comprising the steps of generating a wet steam (reads on "mist containing steam", as instantly claimed), bringing the wet steam into contact with the substrate by spraying and purifying the substrate surface with steam. Kunze-Concewitz specifically teaches

that the steam 16 (Fig. 3) emerging from the nozzle 1 strikes the surface 24, so that the contaminants adhering to the surface 24 or located in indentations of it are loosened by the kinetic energy (col.5, lines 15-27)

With regard to claim 13 Kunze-Concewitz teaches the temperature of the process of 100-200°C (col.5, lines 40-42)

After the cleaning and drying processes is ended, according to Kunze-Concewitz the atmosphere is discharged into the apparatus, and therefore, the effect of staving off the water marks is inherently achieved.

With regard to the limitation of the instant claim 11, reciting "substrates to be purified are set one by one", it is noted that the instant specification does not provide clear description of "one by one" processing. Therefore, such limitation is interpreted as the treatment of individual substrates, which is recited in the teaching of Kunze-Concewitz.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mikhail Kornakov whose telephone number is (571) 272-1303. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1404. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Mikhail Kornakov
Primary Examiner
Art Unit 1746

December 01, 2006